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REVIEWS AND BOOK NOTICES.

What was Ictus in Latin Prosody? By CHARLES E. BENNETT.
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The position taken by Professor Bennett in this pamphlet is a bold challenge to a tacit and almost universal assumption, and, if sustained, involves wide-reaching consequences for scientific theory and educational practice. For it is not a quibble about terminology, whether we define *ictus* as quantitative prominence or vocal stress, but a fundamental divergence of opinion in regard to the nature of rhythm and its application to verse. "In the beginning was Rhythm," says Westphal, and his devout words have at least this element of truth in them, that in rhythm we have an all but universal law of human consciousness.

Perhaps the best starting-point for the discussion will be the positive doctrine which Professor Bennett would substitute for the prevailing conception. It is set forth most logically on p. 371: "If Latin poetry was quantitative, . . . then a dactyl was a long time followed by two short times, etc., . . . absolutely without any other parasitic accretion." Ictus is defined therefore as "the quantitative prominence inherent in a long syllable." The definition applies primarily only to the four fundamental feet—dactyl, anapaest, trochee, and iambus—and not, for instance, to the spondee in the dactylic hexameter. Here the "first long of the spondee is felt as the quantitatively prominent thing in the foot." But have we not here at once a suspicion of "parasitic accretion" in a mental prominence which the quantity does not reveal? But mental prominence is conceded. What is held is that this prominence is not interpreted by a vocal stress or accent, but is only felt in consciousness. Support for this purely quantitative view of ictus or thesis is found, says Professor Bennett, in the Latin grammarians. "These writers in their definitions of arsis and thesis repeatedly call attention in unambiguous phrase to the essentially quantitative character of these concepts." But at this point the argument eludes one somewhat, for there follows from the Roman grammarians not one definition of arsis and thesis, but (1) a definition of foot from Diomedes, (2) a definition of rhythm by Marius Victorinus, with a passage from the same source on the use of characters to indicate long and short syllables, (3) a passage from Atilius Fortunatianus, referring to feet as

moving through the verse *gressibus alternatis*, and (4) a definition of foot from the *Commentum Einsidlense*. But setting aside some logical inconsequence here, since no one of the passages defines or explains the nature of arsis and thesis nor was ever intended to do so, the point of the evidence seems to lie in the words (italicised as quoted) which describe the quantitative aspects of the foot, and it is only for this purpose that Professor Bennett uses it (p. 373): "All these definitions and observations exhibit a striking unanimity in emphasizing the purely quantitative character of ancient verse." That ancient verse was quantitative we did not require evidence to prove. We started, as I understood, to get at the nature of thesis or ictus, on the determination of which question depends the conclusion of Professor Bennett, that ancient verse was *purely* quantitative, i. e. without rhythmic accent. Yet I can not see that these passages, which do not define thesis, and were never meant to, have advanced us beyond the hypothetical assertion from which we started, that thesis or ictus is the quantitative predominance of the long syllable.¹

But to come to the question at issue, the nature of thesis, in a positive way, it would seem to me best to begin with the conception of the foot. Here we can take no better starting-point than the source of all or nearly all ancient theory in the matter, Aristoxenus: *ὃ σημαίνεμεθα τὸν ῥυθμὸν καὶ γινώσκον ποιούμεν τῇ αἰσθήσει πούς ἐστιν* (Westphal, §16). "That by which we indicate the character of the rhythm and make it intelligible to the perception is the foot." *τῶν δὲ ποδῶν οἱ μὲν ἐξ δύο χρόνων σύγκεινται, τοῦ τε ἄνω καὶ τοῦ κάτω κτλ.* (§17). Here, then, is the simplest form of the foot, consisting of two *χρόνοι*, one of which is *ὁ ἄνω χρόνος*, the other *ὁ κάτω χρόνος*. In poetical practice (though the grammarians give examples of it) it does not in reality exist, because the rhythmic language does not easily afford a continuous series of short syllables. But we are dealing with a conception and it will serve to illustrate one or two things. First of all there is no quantitative prominence in the form $\cup\cup$, and here at all events the rhythmic effect must be produced by something else than quantity. This could be nothing else than stress or accent, and only thus would it be possible to make the rhythm intelligible (as $\cup\cup$ or $\cup\acute{\cup}$) to the ear.² For there are only three usual forms of sound rhythm, viz. (1) recurrent intensities, as $\cup\cup\cup\cup$, or (2) recurrent quantitative elements,

¹ In pointing out that Aristoxenus and the Greek theorists made a time division of arsis and thesis (*monosemos*, *disemos*, etc.), have we explained thereby necessarily the nature of arsis and thesis? If, for example, we divide a musical bar of $\frac{2}{3}$ time into down-stroke and up-stroke and point out that the down-stroke is $\frac{1}{3}$ and the up-stroke $\frac{1}{3}$, have we given any light, to one who does not know, on the real meaning of down-stroke and up-stroke?

² It might be urged that Aristoxenus, out of desire for theoretical completeness, had assumed an impossible form. But his criticism of this rhythm is not that it is impossible, but that it would have too rapidly recurring *σημασία* (*πυκνήν τὴν ποδικήν σημασίαν*, §31), which would obviously be nothing else than rhythmic accent.

as $-\cup-\cup$, or (3) a combination of both, as $\cup\cup\cup$. I have dwelt on this point to show that the identification of thesis (\acute{o} κάτω χρόνος) with quantitative prominence is susceptible of theoretical refutation out of the words of the great master of ancient rhythmical theory, whose doctrine is contained in the very passages which Professor Bennett cites to establish his own view.¹

Now, what this teaches us concerning the foot² from a theoretical standpoint is, that it is a definite series of χρόνοι or primary times distributed between an up-time and a down-time, the nature of which is still, let us grant, to be determined. In the dactyl and the spondee the arsis is disemos (or two times) and the thesis disemos, so that from a theoretical point of view there is here no quantitative prominence. The prominence rests with the disposition of the κάτω χρόνος, which may fall on either. It remains therefore for us to ascertain what is meant by the down stroke or time. That prominence of some kind is meant by it is not denied, and we have already seen that in the rhythmic unit $\cup\cup$ it could be nothing else than intensity, whether a subjective intensity, as when we group the exhaust of a locomotive into sets of four (or double two), or a vocal or sound stress when we pronounce such a rhythm and make it intelligible to the ear of another (γνώριμον ποιούμεν). That the nature of rhythm was thus apprehended by Aristoxenus may be pointed out by other illustrations from the fragment of the Rhythmical Elements which survives. Thus §4: οὕτω καὶ τῶν ῥυθμιζομένων ἕκαστον πλείους λαμβάνει μορφάς, οὐ κατὰ τὴν αὐτοῦ φύσιν, ἀλλὰ κατὰ τὴν τοῦ ῥυθμοῦ. "Thus a given rhythmizomenon takes on various forms not by reason of its own nature, but through the nature of the rhythm." In these words Aristoxenus gives utterance to the psychological principle involved above, of the ability of the mind to group the same series of sounds in accordance with any rhythmic suggestion that may be conveyed to it. He continues: ἡ γὰρ αὕτη λέξις, εἰς χρόνους τεθείσα διαφέροντας ἀλλήλων, λαμβάνει τινὰς διαφορὰς τοιαύτας, αἷ εἰσιν ἴσαι αὐταῖς τῆς τοῦ ῥυθμοῦ φύσεως διαφοραῖς. "For the same word or group of syllables distributed into different combinations of times takes on such differences as correspond to differences in the nature of the rhythm." Westphal illustrates this point by examples from ancient and modern music, and notes that in Pindar, Pyth. 2, Boeckh divided the initial words Μεγαλοπόλεις ᾧ thus, $\cup\cup\cup\cup$ $\cup\cup\cup\cup$, while Rossbach and himself assumed the simpler form

¹ Diomedes, p. 474, 30: pes est sublatio ac positio duarum aut trium ampliusve syllabarum etc. *Duarum syllabarum* (as the simplest form in which *sublatio* and *positio* can exist) is of course the *δύο χρόνοι* of Aristoxenus. Cf. Mar. Vict., p. 51 fin. and 52 for *syllaba* (as *metrum*) = *χρόνος*.

² For the non-musical philologist it may be well to state that the bar in music is the sign of accent, and that the measure, i. e. the space between two bars, is made up of quantitative intervals distributed into accented and unaccented parts (called by the Germans "guter" and "schlechter Takttheil" respectively). Cf. Sir Geo. Grove's Dictionary of Music, under *Bar*, *Measure*, *Accent*, *Rhythm*.

∪ ∪ ∪ ∪ ∪ ∪ ∪, etc. Another example is afforded by Mar. Victorinus in the line quoted on p. 208. In such cases we have to do with a difference of rhythmic effect which nothing but a rhythmic accent or intensity could bring out, for the variation in each case is among primary times which admit of no other principle of rhythmic grouping.

Rhythm may be described as a phenomenon of compensation for fatigue in attention. Attention is not continuous, but oscillatory or rhythmical. That is, the mind seizes upon certain impressions and ignores, or gives less value, to others. In sound impressions this oscillation of attention takes on most commonly the form of recurrent degrees of intensity, as when the roar of a cataract seems to rise and fall in rhythmic fluctuation, or when in attention to a series of impressions uniform in intensity and interval, the mind groups the impressions in accordance with some arbitrary rhythmic suggestion. Such suggestion may be conveyed objectively by the sound impressions themselves, as when any one element of the rhythmic unit differs from the rest in intensity, duration, or even quality (pitch). But of all these elements intensity is the most important, so that even quantitative or qualitative impressions appeal to the mind as variable intensities.¹ This has been shown by psycho-physical experiments, and the close relationship of quantitative differences to intensity may be illustrated by the fact that in recurrent impressions of perfect uniformity the mind not only gives arbitrarily greater intensity to certain impressions, but adds also the sensation of greater duration to the (subjectively) accented element.² Similarly it has been shown that a uniform series of unaccented sound impressions of variable duration (— ∪ or — ∪ ∪) tend to combine with quantitative prominence greater degrees of intensity, thus, ∪ ∪, ∪ ∪ ∪. This is true of the simple elements of a rhythmic series, the measure or the foot; but in rhythm as a form of artistic expression the rhythmic series is of primary importance, and here intensity plays a much larger rôle. It becomes thus a question of easy and agreeable 'Zeitauffassung,' of ability to keep in consciousness and to survey as a whole a rhythmic group. In verse it is that feeling which tells us unerringly and without enumeration whether our rhythmical series is complete or defective.³ The importance of variable intensities to lighten the effort of attention or memory,

¹ Cf. Meumann-Wundt, *Philosoph. Studien*, vol. X, p. 283: "Dass unter allen diesen Anlässen [intensity, quantity, quality] zur rhythmischen Gliederung der Eindrücke der intensive Klangwechsel die Hauptrolle spielt, zeigt sich auch darin, dass wir geneigt sind 'die Hebungen und Senkungen der Betonung, durch welche die Gliederung des Taktes vermittelt wird, selbst da anzubringen, wo sie in den objectiven Eindrücken nicht vorhanden sind.'"

² See reports of subjects in Bolton (referred to below), *passim*.

³ Wundt, *Physiol. Psychologie*, vol. II³, p. 72: "Für die Entwicklung und Vervollkommen der Zeitauffassung ist der intensive Klangwechsel von grosser Bedeutung." And p. 77: "Die Vorstellung der Zeitdauer und ihrer Eintheilung findet daher ihren Ausdruck im Rhythmus."

by subordinating several rhythmical units (feet) to a single main stress, has been recognized in numerous investigations of rhythm in its relation to memory and attention, and it will be familiar to any one who has ever droned the multiplication table or the presidents in sing-song.

These are principles which I believe represent generally accepted doctrines of psychology, but for their verification the reader will find a few references in a footnote.¹

Now, it need not be thought that in accepting this principle into verse we introduce an element of violent stress that shall run athwart the natural word-accents. For as "a difference in sounds which would ordinarily remain unnoticed is sufficient to suggest a rhythm" (Bolton, p. 62), so slight variations in intensity are sufficient to interpret the rhythmic feeling of the mind and to make it intelligible to another. In practice the intensity of the rhythmic accent would depend upon a multitude of considerations connected with the *ethos* of the rhythm, the sensual and intellectual content of the rhythmizomenon, personality, familiarity with the language, etc.

An illustration of some of the psychological principles presented is afforded us by the dipodic measurement of many ancient verses, as a type of which the iambic trimeter may serve. This verse as a purely quantitative series of shorts and longs has the form $\cup - \cup - \cup - \cup - \cup - \cup -$, with the possible substitutions. But in this form it exceeds the limits within which a rhythmical series can be apprehended and surveyed without great effort, and accordingly the division of the verse into three sets of twos, or dipodies, is not without a sound psychological basis, although it is often treated as a mere fiction of the theorists (cf. Wundt, p. 73, bottom). But what is implied in this division by dipodies? Just as for the eye the confusing line above is made simple by the grouping $\cup - \cup - \cup - \cup - \cup - \cup -$, so for the ear the long, unbroken succession of intervals is simplified by binding two groups into one. There is but one principle by which such grouping can take place, and that is intensity on the one or the other of the elements of the group, or if the form $\cup \angle$ have already a stress, by a greater intensity on one or the other, thus, $\cup \angle \cup \angle$. The ancient evidence for the dipodic measurement of the trimeter will be found cited by Gleditsch (Müller's Handb., vol. II, p. 732, note). One of the most interesting passages is from the Anon. de Musica (97), where series of iambic dipodies with musical notes are marked with the $\sigma\tau\iota\gamma\mu\acute{\eta}$ over the long of the second

¹ For the whole subject see the luminous chapter of Wundt, *Physiologische Psychologie*, vol. II, p. 72 ff. (*Rhythmische Verbindung der Schallvorstellungen*). The experiments referred to are presented by Mr. T. L. Bolton in a very interesting study of Rhythm in the *Am. Jour. of Psychol.*, vol. VI. On $\cup - \cup$, $\cup \cup$ appealing to the mind frequently as $\angle \cup$, $\angle \cup \cup$, see p. 81. On attention as a rhythm of recurrent intensities, cf. Ladd, *Outlines of Descriptive Psychology*, p. 39, and Sully, *The Human Mind*, vol. I, p. 156. On rhythm and memory, see Ebbinghaus, *Ueber das Gedächtniss*, Leipzig, 1885.

iambus. Similarly Caesius Bassus (ap. Rufinum, G. L., vol. VI, p. 555) speaks of the same parts of the trimeter as being the *loca percussionis* and Juba ap. Prisc. says *in his locis feriuntur*. Now I am aware that Professor Bennett attaches no significance to these terms, or any others, as indicating stress, but in the dipody at least, with or without terms, we can not escape the fact that stress or intensity is the only thing that can break up a quantitative series of six into three sets of twos.

The question of terminology has been alluded to, and it will be as well perhaps to turn our attention to it at this point. For Professor Bennett apparently denies that the terms used by the ancients can have any significance in the question, as being merely figurative descriptions of beating time, and beating time he would hold is not stress (p. 382). At first I was inclined to agree with this position, and in a private communication to Professor Bennett I acknowledged that terminology would perhaps have to be left out of consideration. But further reflection on the matter from a psychological point of view has convinced me that this is not so, and that in fact the ancient designations of the prominent part of the foot are clear reflections of a conception of thesis as stress, to which evidential value can not be denied. First concerning *ictus*, it is quite true, as Westphal (and Professor Bennett) has pointed out, that *ictus* is used of the unaccented as well as of the accented beat in the related passages of Diomedes and Ter. Maurus, and it is obvious that it *may* so be used in Quintil. IX 4, 51 (*pedum et digitorum ictu*).¹ Similarly also Juba (in Priscian, G. L., vol. III, p. 420, 20—not cited by Professor Bennett), in speaking of the scanning of the trimeter by dipodies, says in explanation of the spondees in the odd feet, *quoniam ter feritur hic versus, necesse est, ubicumque ab ictu percussionis vacat, moram temporis adiecti non reformidet*. Here also it would seem that *ictus* is a general term for beat, but that the designation for the accented beat is *percussio* (and so Caes. Bassus, cited above, says: *loca percussionis*, and Quintil. IX 4, 75: *sex pedes, tres percussiones habent*). But still Professor Bennett would urge that *percussio* is used figuratively for beat and does not imply stress in any way. But let us see. We have already pointed out that in a rhythm $\cup - \cup - \cup - \cup - \cup - \cup -$ there will be six syllables characterized by quantitative prominence. But if we are to put into the same scheme three elements of prominence instead of six, it can only be done by varying intensities, thus, $\cup - \cup \times \cup - \cup \times \cup - \cup \times$, and that is what the language tells us as plainly as possible, viz. that it is struck (*percutere ferire*, cf. also *caedere plaudere*) three times.² Perhaps it may be said, at all events there was no stress

¹ But *ictus* κατ' ἐξοχήν of the down beat is perfectly natural—as when in rapid $\frac{3}{8}$ time the conductor gives but two beats, right and left, ignoring the unaccented times—and thus Horace uses the word A. P. 253.

² In note 1, p. 382, Professor Bennett says that Westphal, “although a pronounced adherent of the stress theory of *ictus*, is not bold enough to seek in

in such cases on the iambs falling between the *percussiones*. That is not a point with which I am concerned at present, but it may be observed that, in accordance with all laws of rhythm and phonology, a primary stress of the form $\cup - \cup \cup \cup$ will hardly exist without a secondary stress of the form $\cup \cup \cup \cup$, and so Horace apparently felt it (*cum senos redderet ictus*). So in regard to the other terms used to designate the prominent part of the foot (*pedem supplodere*, *plausus* or *pulsus pedis*, *streptus digitorum* (snapping the fingers), *pollicis sonor*), in denying to them any significance as indicating vocal stress Professor Bennett overlooks the intimate association of mind and muscular expression. That these terms indicative of muscular contraction, corresponding to the prominent part of the foot, afford indubitable evidence of the presence in the mind of recurrent pulsations of intensity will scarcely be denied. But what the mind feels the muscular organism reproduces. It is therefore a matter of indifference from an abstract point of view what muscles are involved. In beating time to music or to verse the listener interprets the recurrent mental stress by striking finger or foot on floor or table; the performer finds the outlet for the recurrent sensations of intensity in the muscular response of the whole vocal organism. Therefore, if we grant that the ancients beat time in a way that implies mental stress, we can not reasonably hold that such designations have no significance as indicating vocal stress.¹

Up to this point I have endeavored to show that the existence of rhythm of recurrent intensities can be demonstrated for ancient verse by a logical analysis of the doctrines of the ancient theorists, by consideration of the psychological aspects of rhythm and (closely connected with this) by a rational interpretation of the terms used to describe or mark the prominent part of the foot or rhythm.

But let us now turn to Latin verse, and in the absence of statements to the contrary, I suppose we must assume that Professor Bennett means his theory to apply to the verse of Plautus and Terence as well as to Virgil and Horace. But it will not require

this word (*percussio*) any confirmation of his view." Such a statement would seem to imply that Westphal has somewhere discussed the matter, or considered it a debatable question. So far as my knowledge goes he always assumes that rhythmic accent was stress, and this, according to Professor Bennett, has been the unwarranted assumption of all scholars of the past, except only Madvig.

¹ Cf. Bolton, l. c., p. 90, who has some very interesting and curious observations on the relation of muscular movements to rhythm. "Most subjects felt themselves impelled by an irresistible force to make muscular movements of some sort accompanying the rhythms. If they attempted to restrain these movements in one muscle, they were very likely to appear somewhere else." Again, p. 91: "Slight or nascent muscular contractions were felt in the root of the tongue or larynx. . . . When (the subject) was asked to restrain all muscular movements, he found great difficulty in maintaining the rhythmical grouping."

elaborate proof to maintain that in the verse of Plautus and Terence there is a rhythmical accent of essentially the same nature as the word-accent. For the two phenomena work just alike and produce the same results, so that it is not always easy to decide whether a given example of syllable-shortening is due to special metrical or general prosodical causes. The matter is so familiar that examples are superfluous.¹

But for another period of the Latin language it may be shown that the rhythmical stress and the word-accent were considered of the same nature. For there is an interesting passage of Gellius (VI 7) in which inference concerning the accent of words is made from the rhythmical prominence which the syllables receive in the verse of the early poets. By this method the poet and antiquarian Annianus, following the lead of the grammarian Probus, determined for the edification of his friend Gellius the correct accent form for a number of adverbs compounded with *ad—affatim*, *exádvērsūm*—and Gellius goes on to give other illustrations reached by the same method. Concerning the soundness of the method there may be doubt, but if the reader will refer to the passage he will not be able to doubt that rhythmical accent is here invoked to determine word-accent.² To deny significance to this evidence would only be possible, I imagine, on the basis of some theory of accent such as Professor Bennett has advanced in the beginning of his paper, for which he does not claim more than that it is possible, and to himself seems even probable. But, obviously, for the age of Plautus and Terence such a theory is not possible, as the phenomena of metrical and prosodical *correptio* already referred to prove to suffocation.³

Professor Bennett says that recent discussion has tended to show that the native Latin verse as exemplified by the Saturnian measure was governed by stress, but that from the time of Ennius "a Latin verse consisted of an orderly and harmonious arrangement of long and short syllables." In theory that is of course true, but in fact the hexameters of Ennius, like the trimeters of Pacuvius and Accius, carry such a burden of spondees that, were it not for the pure foot next to last and an occasional lighter line,

¹ In many cases the shortening is metrical (i. e. due to the influence of the rhythmical stress) and not prosodical (i. e. due to the habit of ordinary word-accent). For the whole question cf. Klotz, *Grundzüge d. altröm. Metrik* (Leipzig, 1890), and note especially p. 88: "Wir haben in allen den zahlreichen Fällen wo wir dieses metrische Kürzungsgesetz beobachtet haben, gefunden, das nicht der geringste Unterschied zwischen naturlangen und positionslangen Silben gemacht wurde, weil eben dies Gesetz in erster Linie ein metrisches, das entscheidende Moment eine bestimmte Position bestimmter Silben im Verse ist, und keine vulgäre Vernachlässigung des gewöhnlichen Positionsgesetzes vorliegt."

² Cf. Schöll, *De Accentu Linguae Latinae*, p. 26 and note 1.

³ From notes 1 and 3, p. 376, I should infer that Professor Bennett would concede this.

we should not know that we were reading verse.¹ I open Müller's Ennius at random and in the frg. 196-203 of the Annals I find four out of eight lines consisting entirely of spondees except in the fifth foot. Now, what could have made out of that cumbersome mass of syllables a literary form that should be tolerable? Rhythm of recurrent stress—and nothing but such rhythm; the same rhythm that skips merrily over the long vowels and clogging consonants of Plautus and moulds them to its will, the rhythm which has the power to lengthen the short syllable and shorten the long, and is the arbitrary genius of all the musical arts.²

The general quantitative correctness of classical poetry does not enable us to see the active moulding power of rhythm and rhythmic stress to anything like the same degree as in the earlier Latin verse, but there are some utterances of writers of this period that would seem to me important for the determination of the question in hand. Cicero and Quintilian, in dealing with the question of oratorical rhythm and cadences, contain not a little that bears on this question, but I must limit myself to a single important passage from Quintilian, though in passing I would refer the reader to the lucid statement of the nature of rhythm in De Or. III 185 ff., where time and stress elements both receive their due attention. In Quintilian, I 10 there is a discussion of music and its elements in its relation to oratory of exceptional interest. In section 22 Aristoxenus' division of musical utterance into *ῥυθμός* and *μέλος* is given, *quorum alterum modulatione, alterum canore et sonis constat*. These have not an exclusive place in song and poetry: *atqui in orando quoque intentio vocis, remissio, flexus, pertinet ad movendos audientium adfectus* (25). These are the rhythmical elements which are comprised in the term *modulatio*—stress (*intentio*) and the absence of stress (*remissio*), with qualitative and quantitative variations implied in the vaguer word *flexus*.

This passage leads me naturally to a consideration of the ancient definitions of *arsis* and *thesis*, which I can not think have been fairly handled by Professor Bennett. That the Latin grammarians and metricians, through ignorance and hasty compilation, have brought miserable confusion into the use of these words is obvious. But let us beware of adding to the confusion. Thus, when Professor Bennett says that Marius Victorinus is probably the only metrician who uses *arsis* in the sense of Greek *θέσις* (p. 367), and that he does it but once, one wonders why no mention is made of the fact that in the same chapter referred to, *sublatio* and *tollere* are repeatedly used of the accented part of

¹ Cf. Horace, A. P. 258:

hic (sc. —) et in Acci
nobilibus trimetris adparet rarus et Enni
in scaenam missos cum magno pondere versus, etc.

² Cf. Mar. Victor., G. L. VI, p. 42, 3: nam ut (rhythmus) volet, protrahit tempora, ita ut breve tempus plerumque longum efficiat, longum contrahat.

the foot. For it is a question of the meaning attached to a term or its equivalents, and not a question of the occurrence of the word *arsis*. Again, one may well wonder on what ground it can be said that Marius Victorinus is probably the only metrician who uses *arsis* thus, when the definition of Martianus Capella agrees so closely with that of Marius Victorinus. But to come to the definitions themselves, the "unique ragout" of Marius Victorinus is more valuable than it seems to Professor Bennett, for it reveals the excellent character of the sources employed by this metrician. First he gives the Greek use of the terms and says (G. L. VI, p. 40, 14): *significant motum pedis, est enim arsis sublatio pedis sine sono, thesis positio pedis cum sono*. That the idea of a muscular intensity corresponding to a mental sensation of stress is contained in the words *positio pedis cum sono*, will seem clear, I think, in the light of what has been said on the relation of muscular movements to rhythm. There follows then the definition of the terms reversed: *item arsis elatio temporis, soni, vocis; thesis depositio et quaedam contractio syllabarum*. This is a definition which reveals thought or an excellent source. For it is a general definition of rhythmical *θέσις*. It is the prominence given in the foot to a time (*χρόνος*) as in rhythmical theory, to a sound as in pure musical rhythm, to a syllable (*vocis*) as in verse. In the definition of *thesis* as *depositio et quaedam contractio syllabarum* we have a valuable piece of correct observation, in the explanation of the fact that in the unaccented part of the foot a long syllable may be shortened (*contractio*) under the influence of the adjacent stress. I have already alluded to examples of this in the verse of Plautus and Terence, and it is of course the theoretical basis of justification for the spondee in iambic or trochaic rhythms.

In entire harmony with this definition is that of Martianus Capella (and others) cited by Professor Bennett on p. 368: *arsis est elevatio, thesis depositio vocis ac remissio* (IX 365, 17). The significance of this definition of *arsis* for vocal stress Professor Bennett seeks to invalidate (1) by implying that it is very doubtful if *elevatio vocis* could possibly have been meant as stress of voice, or if so (2) he thinks that it applies to the accentual poetry of the time. But in regard to the first point it should be noticed that *elevatio vocis* stands in antithesis to *remissio* (where Quintilian with better observation used *intentio vocis*, v. supra, p. 203), and, further, that the identification of or confusion between pitch and intensity is an error that modern phoneticians have only recently learned to avoid.¹ In regard to the second point it need only be observed that the definition of Martianus Capella and the rest is not their own, as the close relationship with Marius Victorinus shows, nor is there any ground for believing that Martianus Capella, whose poetry is quantitative, would have given a

¹ Cf. Sievers, *Phonetik*, p. 177; Techmer, *Phonetik*, p. 69. Cf. also Diomedes, G. L. I, p. 430, 29: *Accentus est . . . elatio orationis vocisve intentio*.

definition of arsis meant to apply to an accentual poetry which he did not practise. The consideration of rhythm may conclude with the description of rhythm from the Anon. de Musica (1 and 85): ὁ ῥυθμὸς συνέστηκεν ἐκ τε ἄρσεως καὶ θέσεως καὶ χρόνου τοῦ καλουμένου παρά τισι κενού,¹ and enough has been advanced to show what the nature of ἄρσις and θέσις is.

There still remains one point on which I would touch, although I approach it with some apprehension, and that is the scansion of the dactyl and tribrach in iambic rhythms. Professor Bennett attaches much importance to this matter (pp. 380 and 381, in replying to the criticism of Professor Hale), and evidently, if it could be shown that these feet were scanned — ∪ ∪ and ∪ ∪ ∪, it would have no little influence upon his attitude toward the whole matter. But he says "not a shred of evidence exists to support this theory," and he reiterates his emphasis of the absence of such evidence so strongly that I am led to distrust the testimony for it that I seem to have found.² But, nevertheless, I shall venture to present it, and leave its interpretation to the judgment of the benevolent reader. Caesius Bassus, the grammarian, and poet-friend of Persius (ap. Rufin., G. L. VI, p. 555), ad *Neronem de iambico sic dicit*: 'Iambicus autem, cum pedes etiam dactyllici generis adsumat, desinit iambicus videri, nisi percussione ita moderaveris, ut cum pedem supplodis, quam iambicum³ ferias; . . . quod dico exemplo faciam illustrius. est in Eunuchio Terentii statim in prima pagina hic versus trimetrus:

Exclusit, revocat: redeam? non, si me obsecret.

*hunc incipe ferire, videberis heroum habere inter manus.*⁴

That the subject was one of considerable discussion is shown also by Marius Victorinus (p. 49, 22), treating of the middle place in five-syllable feet (e. g. — ∪ ∪ —), which become iambic or trochaic

¹ Cf. Mar. Victor., G. L. VI, p. 41, 24: (rhythmi) origo de arsi et thesi manare dinoscitur.

² Christ, *Metrik*, p. 52, to whom Professor Bennett refers, says with more reserve: "Zwar kenne ich kein Zeugniß aus dem Alterthum, welches uns lehrt," etc.

³ *quam iambicum*]. So all the MSS ap. Keil. Keil reads, however, *iambum ferias*. The meaning is not altered essentially, but the reading of the MSS is much clearer, with easy ellipsis of *dactylum*, i. e. "unless . . . you 'strike' the dactyl as an iambus."

⁴ Clear evidence that the dactyl was thus scanned in the verse of Plautus and Terence may be derived from the plays themselves. In such an example as that in the text there is no harshness, for the rhythmic accent agrees with the word-accent (*révocet*). But in Greek trimeters of the new comedy dactylic words are found frequently in the odd places, especially the first (e. g. *εἰκοσι*). Neither has Plautus any hesitation in using dactylic words in the same position (e. g. *omnibus, confice, piscibus*). But in Terence cases of this kind are extremely rare, so that we must infer that Terence felt the harshness of pronunciation arising from the conflict of verse and word-accent, and therefore avoided the situation (cf. Klotz, *Grundzüge altröm. Metrik*, pp. 273-278).

according as the middle syllable is attached to the preceding or the following. The example given is: *Armiger in Ida pede vago litora petens*. Victorinus does not, to be sure, in this connection say anything expressly in regard to the position of the *percussio metrica*, but he does affirm that as a result of this possible variation *multiplex harum figurarum numerus* [ῥυθμός] *per differentias oritur*. As we have seen from the abstract point of view, and as is pointed out by Caesius Bassus, this difference of rhythmical effect must be produced by the distribution of the rhythmical accent. This again is told us expressly by Servius in Donatum (G. L. IV, p. 425, 8 ff.). He treats of the same question for three- and five-syllable feet, but his illustration is drawn from the former. In such case, he says, the question whether the middle syllable belongs to arsis or thesis (using these words, in accordance with a common practice, arbitrarily of the first (*principium*) and last (*finis*) part of the foot, regardless of emphasis) must be considered: *et hoc ex accentu colligimus. nam si in prima syllaba fuerit accentus* [˘˘˘], *arsis duas syllabas possidebit* [˘˘|˘]; *si autem in media syllaba* [˘˘˘], *thesi duas syllabas damus* [˘|˘˘]. The difficulty would not arise, of course, in connection with all trisyllabic feet, but as the ambiguity comes from the succession of short syllables, it is natural that he should have in mind the primary trisyllabic foot, ˘˘˘. I need scarcely point out that *accentus* here refers to the rhythmical accent and not to word-accent. For not once in the chapter does Servius confuse word and foot, an interpretation of his meaning which brought such devastation into his doctrine when, later, Julianus and Pompeius added trisyllabic words as illustrations.¹

The application of the principle of no rhythmic stress to the reading of Latin verse leads Professor Bennett to the enunciation of some views which I dissent from not less heartily than from his primary thesis. Such is, for instance, the statement with which he sums up his discussion (p. 379), that "Latin poetry is to be read exactly like Latin prose." I am aware that I impose upon these words an interpretation which their author did not perhaps mean them to bear, when I affirm my belief that the consistent application of his theory could lead to no other result than that which is thus frankly stated.² For if we consider only the succession of long

¹ The three are grouped together by Professor Bennett (on pp. 368 and 370) in the order Julianus, Servius, Pompeius, without recognition of the distinction pointed out in the text. It is no wonder, therefore, that he despairs of unravelling the tangle. Julianus and Pompeius are "concerned with the phenomena of individual words," but not so Servius. The matter is of no importance, but if we wish to solve puzzles of this kind we can not neglect chronology.

² Without the moulding power of rhythmic movement a purely quantitative rhythm can not be sustained in language. For in ordinary pronunciation all long syllables are not of the same duration, nor again all short syllables, as Aristoxenus had very accurately observed, and as modern phonetic studies have demonstrated.

and short syllables, with nothing to bind the smaller quantitative group of the foot into a higher unity of the rhythm, then all sense of movement and coherency must be lost. Just as in the psychological experiments to which I have referred the subjects report that they could avoid the rhythmic grouping of the whole by close attention to each impression.¹ Or to put my feeling about the matter in another way, I should believe that such a theory could only lead us to look upon the metrical schemes of the poet from the same lifeless, mechanical point of view as is revealed in one of the ancient conceptions of metrical feet which Professor Bennett quotes with approval. It is from the *Commentum Einsidlense*, and as quoted by him reads thus: *his* [sc. *pedibus*] . . . *ad peragendos versus tempora syllabasque metimur*. Supply the omitted words, *quasi pedali regula*, "as with a foot-rule," and we see the ground on which we are standing. That Professor Bennett does not shrink from a reversion to such a mechanical conception is shown by his pamphlet on the 'Quantitative Reading of Latin Poetry,' which I have just received through the courtesy of the publishers. There he affirms (with a dogmatism which the requirements of a school manual may excuse) that the ancients [Romans] felt the lesser Asclepiadean (as in *Maecenas atavis*) thus: —|— — —| — — —| — —. Irrational spondee, choriambi, pyrrhichius—as though there could be any talk of *feeling*² in such a hodge-podge of heterogeneous feet, which makes of the poet's art a mere piece of mosaic jugglery, instead of an organic growth and development from certain simple rhythmical forms.³

But it is impossible to consider all of the questions which crowd upon one *à propos* of the new doctrines of Professor Bennett, and I must content myself with the hope that other conclusions concerning rhythm and ancient metres, derived from the fundamental denial of rhythmic accent, fall together with that arbitrary assumption.

May 22, 1899.

G. L. HENDRICKSON.

Die Sintfluthsagen untersucht von HERMANN USENER. Bonn, Friedrich Cohen, 1899.

In Professor Usener's 'Sintfluthsagen' we have another instalment of his great work on Greek Mythology, another specimen

¹ See Bolton, l. c., p. 63. Ritschl had this complaint to make of Madvig ("das so sehr über den Fuss gespannte Verhältniss Madvig's zur Metrik," etc., op. III, p. 160), whom Professor Bennett recognizes as his predecessor in his primary position.

² All rhythmical feeling depends upon the recurrence of impressions quantitatively equal or approximately so. It is a matter of indifference whether this equivalence is made up of separate sound impressions or rests and holds, and this is as true of modern poetry as of ancient.

³ The matter is developed by Usener in his fascinating book, *Altgriechischer Versbau*, Bonn, 1887.